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Juergen Frosien

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EXAMINER

CHANG, HANWAY

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,206	Applicant(s) FROSIEN, JUERGEN	
	Examiner Hanway Chang	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/20/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

The amended drawings have been accepted.

The amended specification has been accepted.

The previous claims rejected under 35 U.S.C. 112 have been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "respective electrode" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim. In this office action, the limitation "respective electrode" will be considered as "respective ~~electrode~~ element" as previously recited in the independent claim 8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson (US Pat. 2,581,446, hereinafter Robinson).

Regarding claims 1 and 19, Fig. 2 of Robinson discloses a first element (24) having a first opening (27) for acting on a charged particle beam (not shown) (see col. 4, lines 34-62); at least one second element (28) for acting on the charged particle beam (see col. 4, lines 50-62); a first distance piece (44) positioned between the first element (24) and the at least one second element (28) to provide for a minimum distance between the first element (24) and the second element (28) (see col.5, lines 12-25); and a first holding piece (24A) for abutting the first element (24) to the first distance piece (44), wherein the first holding piece (24A) is attached to the first distance piece (44) to fasten the first holding piece (24A) directly to the first distance piece (44) (see col. 5, lines 12-25).

Regarding claim 2, Fig. 2 of Robinson discloses a second holding piece (28A) for abutting the second element (28) to the first distance piece (44) (see col. 5, lines 12-25).

Regarding claim 3, Fig. 2 of Robinson discloses the second holding piece (28A) is attached to the first distance piece (44) (see col. 5, lines 12-25).

Regarding claim 4, Fig. 2 of Robinson discloses the at least one second element (28) having a first structured portion (27A) to be aligned to the first opening (27) (see col. 4, lines 48-62).

Regarding claim 5, Fig. 2 of Robinson discloses the first structured portion (27A) comprises a second opening (27A) to act on the charged particle beam (see col. 4, lines 34-62).

Regarding claim 6, Fig. 2 of Robinson discloses a third element (29) having a second structured portion (27B) to be aligned to the first opening (27) (see col. 4, lines 48-62).

Regarding claim 7, Fig. 2 of Robinson discloses the second structured portion (27B) comprises a third opening (27B) to act on the charged particle beam (see col. 4, lines 34-62).

Regarding claim 8, Fig. 2 of Robinson discloses a first element (24) having a first opening (27) for acting on a charged particle beam (not shown) (see col. 4, lines 34-62); at least one second element (28) for acting on the charged particle beam (see col. 4, lines 50-62); a first distance piece (44) positioned between the first element (24) and the at least one second element (28) to provide for a minimum distance between the first element (24) and the second element (28) (see col.5, lines 12-25); a first holding piece (24A) for abutting the first element (24) to the first distance piece (44), wherein the first holding piece (24A) is attached to the first distance piece (44) to fasten the first holding piece (24A) directly to the first distance piece (44) (see col. 5, lines 12-25); a third element (29) having a second structured portion (27B) to be aligned to the first opening (27) (see col. 4, lines 48-62); and a second distance piece (60) to define a minimum distance between the second element (28) and the third element (29) (see col. 5, lines 26-58).

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Regarding claim 9, Fig. 2 of Robinson discloses a second holding piece (28A) for abutting the second element (28) to the first distance piece (44) (see col. 5, lines 12-25) and a third holding piece (54) for abutting the second element (28) to the second distance piece (60) (see col. 5, lines 26-58).

Regarding claim 10, Fig. 2 of Robinson discloses a fourth holding piece (48) for abutting the third element (29) to the second distance piece (60) (see col. 5, lines 43-58).

Regarding claim 12, Fig. 2 of Robinson discloses the first distance piece (44) is a spherical shape (see col. 5, lines 18-23).

Regarding claim 15, Fig. 2 of Robinson discloses the first holding piece (24A) comprises respective nuts (66 and 67) for abutting the respective element (see col. 5, lines 59-71).

Regarding claim 17, Fig. 2 of Robinson discloses that the second (28) and third (29) elements are second and third electrodes (see col. 4, lines 34-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson.

Regarding claim 11, Fig. 2 of Robinson does not explicitly disclose the first distance piece is three distance pieces. However, Fig. 1 of Robinson discloses a distance piece is three distance pieces (18, 19, and 20) (see col. 3, lines 5-12) to prevent lateral shift. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to have three or more distance pieces for the purpose of preventing lateral shifts of the elements as taught by Robinson.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Benveniste (US PGPub 2005/0242293, hereinafter Benveniste).

Regarding claim 16, a difference between Robinson and the claimed invention is the first holding piece comprises springs for abutting the respective first element to the first or second distance piece at predetermined pressures. However, in the same field of endeavor, Fig. 1 of Benveniste discloses a solution to abut electrodes to spherically shaped distance pieces. Benveniste discloses the use of spring-loaded screws (not shown) to attach ceramic balls (9) to electrodes (8a-8d) to maintain a minimum distance between the electrodes (see paragraph [0011]). Benveniste teaches that using spring-loaded screws permits slight movement of the electrodes with respect to each other. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Robinson by using spring-loaded screws to attach the electrodes and distance pieces together for the purpose of forming the device while permitting slight movement of the electrodes for small adjustments. It should be noted that any pressure from the spring-loaded screws used to hold the electrodes and distance pieces is the predetermined pressure.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Tsuno (US Pat. 4,450,357, hereinafter Tsuno).

Regarding claim 18, a difference between Robinson and the claimed invention is the first, second or third elements are respective first, second or third pole pieces. However, in the same field of endeavor, Fig. 1 of Tsuno discloses a beam optical component which uses three magnetic pole pieces (7, 8, and 9) as the elements (see col. 1, lines 18-31). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Robinson by having magnetic pole pieces as the elements for the purpose of acting on the charged particle beam as taught by Tsuno.

Allowable Subject Matter

Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 13, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including, the first distance piece or second distance piece are spherically shaped bodies having at least one waist to reduce the lateral extension of the sphere.

Regarding claim 14, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including, the first holding piece or third holding piece is inserted into the respective distance piece.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanway Chang whose telephone number is (571)270-5766. The examiner can normally be reached on Monday to Friday 7:30 AM till 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jack I. Berman/
Primary Examiner, Art Unit 2881

Hanway Chang
June 18, 2009
/H. C./
Examiner, Art Unit 2881